

## 8.2 Biological Resources

### 8.2.1 Introduction

This subsection describes the laws, ordinances, regulations, and standards (LORS) that apply to biological resource protection, the environmental setting and conditions of the affected site, the methods that were used to evaluate the potential presence of special-status species, and the potential adverse impacts on biological resources that could occur as a result of project construction and operation. It also presents protection and mitigation measures that would avoid, minimize, or compensate for adverse impacts.

### 8.2.2 Applicable Laws, Ordinances, Regulations, and Standards

The following subsections and Table 8.2-1 describe the primary LORS that apply to potential impacts on biological resources in the project area and list the agencies responsible for enforcing the regulations.

#### 8.2.2.1 Federal

##### 8.2.2.1.1 Federal Endangered Species Act (FESA, 16 U.S. Code [USC] 1531 et seq.)

Applicants for projects that could result in adverse impacts on any federally listed species are required to consult with and mitigate potential impacts in consultation with the U.S. Fish and Wildlife Service (USFWS). Adverse impacts are defined as “take,” which is prohibited except through authorization of a Section 7 or Section 10 consultation and Incidental Take Authorization. “Take” under federal definition includes “such act as may include significant habitat modification or degradation” (50 Code of Federal Regulations [CFR] §17.3). Species that are candidates for listing are not protected by FESA; however, USFWS advises that a candidate species (as well as species of concern) could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration.

##### 8.2.2.1.2 Migratory Bird Treaty Act (16 USC 703 to 711)

This Act protects all migratory birds, including nests and eggs.

##### 8.2.2.1.3 Bald and Golden Eagle Protection Act (16 USC 668)

This Act specifically protects bald and golden eagles from harm or trade in parts of these species.

##### 8.2.2.1.4 Clean Water Act (33 USC 1251 et seq.)

The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters [Section 10(a)]. Section 404 of the Clean Water Act (CWA) establishes a program to regulate and permit the discharge of dredged or fill material into waters of the United States, including wetlands.

Section 401 of the CWA requires that federal agencies issuing licenses or permits for construction or other activities get a written certification that the activity will not cause or contribute to a violation of the state or tribe’s water quality standards. After receiving the certification, the federal agency issuing the permit must include conditions in the permit to prevent the project from degrading water quality of a downstream state or tribe.

**TABLE 8.2-1**

Laws, Ordinances, Regulations, and Standards Applicable to Biological Resources.

LORS	Purpose	Regulating Agency	Permit or Approval	Applicability (AFC Section Explaining Conformance)
<b>Federal</b>				
Endangered Species Act of 1973 and implementing regulations, Title 16 USC §1531 et seq. (16 USC 1531 et seq.), Title 50 CFR §17.1 et seq. (50 CFR 17.1 et seq.)	Designates and protects federally threatened and endangered plants and animals and their critical habitat.	USFWS	Issues, Biological Opinion, or Authorization with Conditions after review of project impacts	Applicant has sited facility to avoid habitat for endangered species. Critical habitat has not been designated in the project area. Potential habitat for special-status species does not exist on the project site. Implementation of protection measures will reduce impacts to less than significant (Subsections 8.2.3.2, 8.2.4. and 8.2.5).
Section 404 of Clean Water Act of 1977	Requires permit to fill jurisdictional wetlands.	U.S. Army Corps of Engineers (USACE)	Section 404 Permit	Applicant has sited the facility to avoid wetlands
Section 401 of Clean Water Act of 1977	Requires the Applicant to conduct water quality impact analysis for the project when using 404 permits and for discharges to waterways.	Regional Water Quality Control Board (RWQCB)	Water Quality Certification	Applicant will avoid waters by using horizontal directional drilling (HDD), or will open trench in compliance with Nationwide Permit (NWP) 12. (Subsection 8.2.4.2). Applicant will apply for a 401 permit if required (Subsection 8.2.4.3).
Migratory Bird Treaty Act 16 USC §§703-711	Prohibits the non-permitted take of migratory birds.	USFWS and California Department of Fish and Game (CDFG)	California Energy Commission (CEC) Conditions	Applicant will avoid take of migratory birds by implementing migratory bird protection measures (Subsections 8.2.4.2 and 8.2.5).

**TABLE 8.2-1**

Laws, Ordinances, Regulations, and Standards Applicable to Biological Resources.

<b>LORS</b>	<b>Purpose</b>	<b>Regulating Agency</b>	<b>Permit or Approval</b>	<b>Applicability (AFC Section Explaining Conformance)</b>
<b>State</b>				
California Endangered Species Act of 1984, Fish and Game Code, §2050 through §2098	Protects California's endangered and threatened species.	CDFG	Comments as cooperating agency on Section 7 or Issues 2081 incidental take permit for state-listed species.	No state-listed species will be "taken" as a result of the project (Subsections 8.2.4.2 and 8.2.5).
Title 14, California Code of Regulations (CCR) §§670.2 and 670.5	Lists plants and animals of California declared to be threatened or endangered.	CDFG	N/A	N/A
Fish and Game Code Fully Protected Species §3511: Fully Protected birds §4700: Fully Protected mammals §5050: Fully Protected reptiles and amphibians §5515: Fully Protected fishes	Prohibits the taking of listed plants and animals that are Fully Protected in California.	CDFG	N/A	Applicant will avoid take of state-listed plants and wildlife species (Subsections 8.2.4.2 and 8.2.5)
Fish and Game Code §1930, Significant Natural Areas (SNA)	Designates certain areas such as refuges, natural sloughs, riparian areas, and vernal pools as significant wildlife habitats. Listed in the CNDDDB.	CDFG		There are no SNAs in the project area (Subsection 8.2.3.1).
Fish and Game Code §1580, Designated Ecological Reserves	The CDFG commission designates land and water areas as significant wildlife habitats to be preserved in natural condition for the general public to observe and study.	CDFG		There are no DERs in the project area (Subsection 8.2.3.1).
Fish and Game Code §1600, Streambed Alteration Agreement (SAA)	Reviews projects for impacts to waterways, including impacts to vegetation and wildlife from sediment, diversions, and other disturbances.	CDFG	Issues conditions of the SAA that reduces and minimizes effects on vegetation and wildlife downstream of construction areas.	Applicant will apply for SAA to put pipelines under irrigation canals if required to do so by CDFG (Subsection 8.2.4).

**TABLE 8.2-1**

Laws, Ordinances, Regulations, and Standards Applicable to Biological Resources.

<b>LORS</b>	<b>Purpose</b>	<b>Regulating Agency</b>	<b>Permit or Approval</b>	<b>Applicability (AFC Section Explaining Conformance)</b>
Native Plant Protection Act of 1977, Fish and Game Code, §1900 et seq.	Designates state rare and endangered plants and provides specific protection measures for identified populations.	CDFG	Reviews mitigation options if there will be significant project effects on threatened or endangered plant species	There are no rare or endangered plants on the project site (Subsections 8.2.4.2 and 8.2.5).
Public Resource Code 25527	Siting of facilities in certain areas of critical concern for biological resources, such as ecological preserves, wildlife refuges, estuaries, and unique or irreplaceable wildlife habitats of scientific or educational value, is prohibited, or when no alternative, strict criteria is applied.	CEC	Specific Findings included in Final Decision	There are no areas of critical biological concern in the project area (Subsection 8.2.4).
Title 20 CCR §§1702 (q) and (v); and	Protects “areas of critical concern” and “species of special concern” identified by local, state, or federal resource agencies in the project area, including the California Native Plant Society (CNPS).	USFWS and CDFG	Issues Biological Opinion or Authorization with Conditions after review of project impacts.	There are no areas of critical biological concern in the project area (Subsection 8.2.4).
Title 14 CCR Section 15000 et seq.	Describes the types and extent of information required to evaluate the effects of a proposed project on biological resources of a project site.	USFWS and CDFG	Review and comment on AFC.	AFC provides this information (Subsection 8.2.4).
Suggested Guidelines for Raptor Protection (Avian Power Line Interaction Committee [APLIC], 1996)	Describes design measures to avoid and reduce impacts to raptors from electrical transmission and other facilities.	CEC	CEC Conditions of Approval	Applicant will implement design measures to protect raptors from collision and electrocution (Subsections 8.2.3.2, 8.2.4.3, and 8.2.7).



### 8.2.2.2 State

#### 8.2.2.2.1 California Endangered Species Act (Fish and Game Code Section 2050 et seq.).

Species listed under this act cannot be “taken” or harmed, except under specific permit. At present, “take” means to do or attempt to do the following: hunt, pursue, catch, capture, or kill.

#### Fish and Game Code

**Section 3511** describes bird species, primarily raptors, that are “fully protected.” Fully protected birds may not be taken or possessed, except under specific permit requirements.

**Section 3503** states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

**Section 3503.5** protects all birds of prey and their eggs and nests.

**Section 3513** makes it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird.

**Sections 4700, 5050, and 5515** lists mammal, amphibian, and reptile species that are fully protected in California.

**Sections 1900 et seq.**, the Native Plant Protection Act lists threatened, endangered, and rare plants listed by the state.

#### 8.2.2.2.2 Title 14, California Code of Regulations, Sections 670.2 and 670.5

These sections list animals designated as threatened or endangered in California. California species of special concern (CSC) is a category conferred by the CDFG on those species that are indicators of regional habitat changes or are considered potential future protected species. CSCs do not have any special legal status, but are intended by CDFG for use as a management tool to take these species into special consideration when decisions are made concerning the future of any land parcel.

#### 8.2.2.2.3 California Fish and Game Code (Sections 1601 through 1607)

These sections prohibit alteration of any stream, including intermittent and seasonal channels and many artificial channels, without a permit from CDFG. The limit of CDFG jurisdiction is subject to the judgment of the department, up to the 100-year flood level. This applies to any channel modifications that would be required to meet drainage, transportation, or flood control objectives of the project.

#### 8.2.2.2.4 California Environmental Quality Act (CEQA) (Public Resources Code Section 15380)

CEQA defines “rare” in a broader sense than the definitions of threatened, endangered, or species of special concern. Under this definition, CDFG can request additional consideration of species not otherwise protected. CEQA requires that the effects of a project on environmental resources be analyzed and assessed using criteria determined by the lead agency.

#### **8.2.2.2.5 Warren-Alquist Act**

The Warren-Alquist Act is a CEQA-equivalent process implemented by the CEC. Preparation of this application will result in an assessment prepared by the CEC staff to fulfill the requirements of CEQA.

#### **8.2.2.3 Local and Other Jurisdictions**

The following subsections and Table 8.2-2 describe the applicable conservation policies that apply to potential impacts on biological resources in the project area.

##### **8.2.2.3.1 Applicable Habitat Conservation Plans and Critical Habitat Designations**

The City of Grand Terrace does not have approved habitat conservation plan that covers the area of the proposed AES Highgrove facility. Similarly, the City of Riverside does not have an approved habitat conservation plan that covers the area of the proposed gas line. However, the proposed gas pipeline route traverses both San Bernardino County and Western Riverside County. While San Bernardino County does not have an approved habitat conservation plan that covers the project features, Western Riverside County has an approved Multi Species Habitat Conservation Plan (MSHCP) that encompasses approximately 1.26 million acres and serves as a Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of FESA, as well as a Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001. Analyses of the project location and potential impacts from construction and operation indicate it is unlikely that the proposed project would significantly affect any of the species or their critical habitat targeted in the Western Riverside County MSHCP.

Critical habitat has been designated under the FESA in San Bernardino and Riverside counties for the southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii ssp pusillus*), desert tortoise (*Gopherus agassizii*), Cushenberry milk-vetch (*Astragalus albens*), Cushenberry buckwheat (*Eriogonum ovalifolium*), San Bernardino Mountains bladderpod (*Lesquerella kingii ssp. bernardina*), Cushenberry oxytheca (*Oxytheca parishii* var. *goodmaniana*), and Parish's daisy (*Erigeron parishii*).

The closest Critical Habitat Unit (CHU) for the southwestern willow flycatcher is located approximately 2 miles northwest of the project (USFWS, Critical Habitat Portal) along the foothills of the San Gabriel Mountains, within the Jurupa Hills. The unit includes lands within the San Bernardino National Forest and on Norton Air Force Base that include portions of the Santa Ana River and extend to its tributaries including Bear Creek, Mill Creek, Holcomb Creek, and the San Timoteo Wash.

Critical habitat for least Bell's vireo was designated by the Service on February 2, 1994 (59 FR 4845), and includes reaches of 10 streams in southern California from Santa Barbara County to San Diego County encompassing approximately 38,000 acres. Critical habitat for the species includes portions of the Santa Ana River in Riverside and San Bernardino counties. The closest CHU for least Bell's vireo is located approximately 2 miles northwest of the AES Highgrove site.

**TABLE 8.2-2**  
Applicable Conservation Policies

Element	Goal/Policy	Conformance
<b>San Bernardino County General Plan</b>		
Natural Resources	Goal C-6 Preserve rare and endangered species and protect areas of special habitat value.	The AES site is not in a sensitive natural area and protection and mitigation measures were developed to avoid and minimize impacts to sensitive areas.
Natural Resources	Policy BI-3 Because species occurrences may be adversely affected by land use approvals, provisions of Policy BI-1 may be applied in areas supporting these species if it can be shown that the species is “threatened” as that term is used in the Federal Endangered Species Act.	The project will involve informal consultation with CDFG and USFWS if required. Protection and mitigation measures were developed to avoid and minimize impacts to sensitive areas.
Natural Resources	Goal C-7 Conserve populations and habitats of commonly occurring species.	The project will avoid impacts to commonly occurring species by remaining in previously developed areas.
<b>Riverside County General Plan</b>		
Open Space and Conservation	OS 3.3 Minimize pollutant discharge into storm drainage systems and natural drainage and aquifers.	Onsite discharges will be diverted to the detention basin. If the HDD construction method is used to cross drainages, a contingency plan to address the inadvertent return of drilling mud will be developed prior to construction.
Open Space and Conservation	OS 5.5 New development shall preserve and enhance existing native riparian habitat and prevent obstruction of natural watercourses.	Project activities have been sited to avoid riparian habitats.
Open Space and Conservation	OS 5.6 Identify and, to the maximum extent possible, conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.	Project activities have been sited to avoid upland, wetland and riparian areas
<b>County of Riverside General Plan – Highgrove Area Plan</b>		
Open Space and Conservation	Policy HAP 18.1. Protect the watercourse and floodplain areas, and provide recreational opportunities and flood protection through adherence with the General Plan Land Use and Multipurpose Open Space Elements.	If the HDD construction method is used to cross drainages, a contingency plan to address the inadvertent return of drilling mud will be developed prior to construction.
Multispecies Habitat Conservation Plan	Policy HAP 19.2. Maintain a contiguous linkage through the Springbrook Wash from Box Springs Reserve to the Santa Ana River.	If the HDD construction method is used to cross drainages, a contingency plan to address the inadvertent return of drilling mud will be developed prior to construction.
Multispecies Habitat Conservation Plan	Policy HAP 19.4. Conserve large blocks of inter-connected coastal sage scrub habitat in order to connect gnatcatcher populations within Riverside County with those located at Blue Mountain in San Bernardino County.	Project activities have been sited to avoid coastal sage scrub habitat.

Sources: San Bernardino County, 1998; Riverside County, 1993; Riverside County, 2003.

The proposed project disturbance areas do not fall in any designated or proposed critical habitat areas. There are no preserves or limitations associated with this plan that are affected by the project. Therefore, construction of the project would not conflict with goals of any County HCP. Therefore, no significant impacts to critical habitat are expected.

#### **8.2.2.3.2 San Bernardino County General Plan**

San Bernardino County is currently updating the General Plan, with completion anticipated for 2006. The Natural Resources Element of the current General Plan (San Bernardino, 1998) contains specific objectives to preserve biological resources. It also contains specific policies and goals for protecting areas of sensitive plant and wildlife habitat and for assuring compatibility between natural areas and development. Conservation policies applicable to the project are summarized in Table 8.2-2.

#### **8.2.2.3.3 San Bernardino County Development Plan**

Chapter 4, Division 9 of the San Bernardino County Development Plan applies to all desert native plants and riparian habitat on private land within the unincorporated areas of San Bernardino County and on public land owned by the County of San Bernardino or the State of California. Removing, harvesting, or transplanting desert native plants must first be approved by the County. The removal of any vegetation within 200 feet of the bank of a stream or in an area indicated as a protected riparian area on an overlay map or Specific Plan, shall be subject to a tree or plant removal permit. Streams include those shown on United States Geological Survey Quadrangle topographic maps as perennial or intermittent, blue or brown lines (solid or dashed), and river wash areas. No desert native or riparian vegetation is expected to be removed as a result of the proposed project and removal actions by any public utility subject to jurisdiction of the Public Utilities Commission are exempt from the permitting requirements.

### **8.2.3 Environmental Setting**

The following subsections describe the biological conditions of the proposed AES site, beginning with a regional overview, the vegetation types and habitat present in the project area, a description of wildlife typical to the area, and a discussion of specific special-status species known to occur in the general region (see Figures 8.2-1 and 8.2-2 for documented species locations, figures are located at the end of the subsection).

#### **8.2.3.1 Regional Overview**

The proposed AES site is located in the City of Grand Terrace, San Bernardino County. San Bernardino County comprises three regions – the Valley, Mountain, and Desert, each with distinct geographic and physical characteristics. The proposed AES site is located in the Valley Region, which contains about 480 square miles and is bordered on the west by the Chino, Puente, San Jose, and Jurupa Hills and on the north by the San Gabriel and San Bernardino Mountains. The San Bernardino range trends southeast forming the eastern limit of the Valley along with the Yucaipa and Crafton Hills. The southern limits of the Valley are marked by alluvial highlands extending south from the San Bernardino and Jurupa Hills. Elevations within the Valley range from about 500 feet on the Valley floor to approximately 5,400 feet in Yucaipa Hills.

The region is influenced by the nearby Pacific Ocean (approximately 115 miles to the west) to produce a Mediterranean climate consisting of warm, dry summers and mild, wet

winters. Summer temperatures frequently exceed 100 degrees Fahrenheit (°F) and winter temperatures are generally mild, with fewer than 10 freezing days per year. Rainfall averages 10 to 15 inches per year.

### 8.2.3.2 Highgrove Project Site and Linears

The Highgrove project site is located at 12700 Taylor Street, north of the intersection of Taylor and Main streets, at the site of the former Highgrove Generating Station, which was owned by Southern California Edison (SCE). The project site for the new facility will occupy approximately 9.8 acres. The project also includes demolition of the existing Generating Station equipment. A portion of the parcel on which the existing plant is located will be used for construction parking and construction laydown. This area contains scattered ruderal vegetation bordered by Russian olive (*Elaeagnus angustifolius*) trees. The laydown area is completely developed with buildings, asphalt surfaces, and some landscape vegetation.

Primary access to the site will be provided via an existing paved entrance from Taylor Street, which was used to access the former Highgrove Generating Station. The electrical transmission interconnection will link the Highgrove Project to the SCE power grid through a 115-kV switchyard located adjacent to the site. Natural gas for the facility will be delivered to the site via approximately 7 miles of new 12-inch pipeline that will connect to the Southern California Gas (SoCalGas) existing main pipeline (Figure 8.2-2). The water supply source for the project will be the existing onsite well water system. Water from Riverside Highland Water Company will be used as an emergency backup supply. Potable water for drinking and sanitary uses will also be provided by Riverside Highland Water Company.

The site is currently bordered on the north by a ruderal area used for construction material storage, on the west by railroad tracks, on the south by the Cage Park Property (a private park previously owned by SCE), and on the east by agricultural fields. Figures 8.2-3a through 3e, include project feature locations and biological resources identified on aerial photos at 1:6,000 scale.

The primary land uses adjacent to the project site are agricultural, industrial, and residential. The project site and neighboring parcels directly north, south and west of the site are zoned industrial (M2). Parcels to the east are currently zoned for restricted manufacturing (RM). (Refer to Subsection 8.4, Land Use, for additional information about development plans for adjacent parcels.)

The property is approximately 940 feet above mean sea level and is located less than 250 feet east of the Riverside Canal Aqueduct, a waterway that flows northeast to southwest. Other surface waters in the vicinity include Springbrook Wash, approximately one mile south; and Gage Canal, approximately three-quarters mile east (see Figure 8.14-1). The Santa Ana River is approximately 1.75 miles west of the site and flows southwest toward the Pacific Ocean, approximately 45 miles away. Lake Mathews and Lake Perris, both in Riverside County, are approximately 13 miles to the southwest and southeast, respectively. There are no Significant Natural Areas or Designated Ecological Reserves in the project area.

The following subsections describe the types of habitat found in the project impact area. A comprehensive list of special-status species obtained from the USFWS and CDFG's California Natural Diversity Data Base (CNDDB) that are known or have the potential to

occur in the project impact area are listed in Table 8.2-3 (at the end of this subsection) and described in Subsection 8.2.3.3.

### **8.2.3.3 Habitat and Vegetation Communities**

Habitat types potentially affected in the project area comprise coastal sage scrub, agricultural fields, stormwater canals and drainages, riparian woodlands and associated rivers and streams, ruderal roadsides, and ornamental - industrial, commercial, landscape, and residential (Figures 8.2-3a through 3e).

#### **8.2.3.3.1 Coastal Sage Scrub**

Coastal sage scrub habitat can be found approximately one-half mile northwest of the project site within the Jurupa Hills and along the foothills in Sycamore Canyon (Figures 8.2-3a through 3e). This vegetation community supports a mixture of sclerophyllous low chaparral shrubs and drought-deciduous sage scrub species. Characteristic species in this habitat include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), California encelia (*Encelia californica*), and several species of sage (e.g., *Salvia mellifera*, *S. apiana*) (Holland, 1986). No special-status plant species have been reported in this area.

Wildlife species that commonly frequent coastal sage scrub habitats in San Bernardino and Riverside Counties include coyote (*Canis latrans*), Audubon cottontail (*Sylvilagus audubonii*) and the California ground squirrel (*Spermophilus beecheyi*).

#### **8.2.3.3.2 Agricultural Fields**

Agricultural activity occurs in the vicinity of the project site and is comprised of row crops and orchards (Figures 8.2-3a through 3d). Farming activities result in the complete removal of native vegetation as farm fields are plowed or graded up to the edge of rural roads and highways.

Vegetation species present are almost exclusively agricultural crop, maintained in a weed-free state. Special-status plant species endemic to the area have narrow habitat requirements. Many of which require periodic flooding or similar mesic conditions and are not expected to occur within agricultural areas.

Wildlife species that commonly frequent orchards and row crops are generally wide-ranging species that are highly adaptable. American crows (*Corvus brachyrhynchos*), Brewer's blackbirds (*Euphagus cyanocephalus*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), and house sparrows (*Passer domesticus*) are common in the area. Large, soaring raptors (e.g., red tail hawks [*Buteo jamaicensis*] and Swainson's hawks [*Buteo swainsoni*]) often forage in row-crop fields. California ground squirrels and coyotes are also relatively common. This habitat type is regionally abundant and the species that occur there are generally widely distributed and common.

#### **8.2.3.3.3 Stormwater Canals and Drainages**

Stormwater canals and drainages in the area direct surface water runoff toward washes west and south of the project site that eventually drain into the Santa Ana River. These washes contain fragmented riparian habitat and are discussed in detail in Section 8.2.3.3.4. Stormwater canals and drainages in the proposed construction area vary in size from approximately 3 to 30 feet wide, are cement-lined, and generally ephemeral in nature (see

Figure 8.14-1). A drainage channel south of the project site in Cage Park Property feeds into a man-made detention basin in Cage Park Property used by the previous power plant during well testing and cooling tower discharge. The Cage Park Property detention basin supports hydrophytic vegetation and is inundated year-round. Fish (species unknown) have been used in the detention basin to control mosquito larvae (Doug Russell, site manager, personal communication). This area also receives seasonal runoff from concrete lined stormwater channels. Overflow from the Cage Park Property detention basin drains into tributaries of that flow into the Santa Ana River and eventually to the Pacific Ocean. However, project activities would not occur in this area and stormwater drainage from the project site would be diverted to an onsite detention basin, eliminating any potential effect to the Cage Park Property basin.

The stormwater canals and drainages directly south and north of the site are partially lined with concrete. The southern drainage, located in Cage Park Property, was clear of all vegetation; however, the northern drainage (located on the northern edge of the Tank Farm Property) contained vegetation species associated with wetland areas (cattails and mule fat). These canals and drainages empty into tributaries that flow into the Santa Ana River and eventually release into the Pacific Ocean, making them fall under the jurisdiction of the USACE as waters of the U.S. Clearing or removing vegetation from the channel would require 401/404 permitting. Wildlife that may use vegetated or wetland portions of canals and drainages include egrets, herons, song birds, raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), and coyotes. Mallard ducks (*Anas platyrhynchos*) and other migratory waterfowl may use ditches that have some remaining cover, and red-winged blackbirds (*Agelaius phoeniceus*) could use patches of cattails in the ditches as nest sites. None of the canals or drainages in the project impact areas contain suitable vegetation for significant wildlife use.

No special-status species were observed or are known or expected to inhabit the drainages in the project impact areas.

#### 8.2.3.3.4 Riparian Woodlands and Associated Rivers and Streams

Fragmented riparian habitat occurs along linear corridors south and west of the AES site. The southern riparian section includes the western portion of Springbrook Wash, a wildlife corridor (designated by the Western Riverside County MSHCP) extending from Box Springs to the Santa Ana River (Figure 8.2-3a). The riparian habitat bordering Springbrook Wash where it is crossed by the gas line includes eucalyptus (*Eucalyptus sp.*), walnut (*Juglans sp.*), Mexican (Blue) elderberry (*Sambucus mexicana*), cottonwood (*Populus sp.*) and willow (*Salix sp.*), with an understory of mule fat (*Baccharis salicifolia*), and poison hemlock (*Conium maculatum*). Vegetation in this area is maintained by surface water runoff from the nearby mountains as well as discharges from stormwater drainages and canals. Tall trees in the area provide potential nest sites for raptors (e.g., Swainson's hawk Cooper's hawk (*Accipiter cooperii*), white-tailed kite (*Elanus leucurus*), and red-shouldered (*Buteo lineatus*) and red-tailed hawks. A red-shouldered hawk was observed along Springbrook Wash during the site visit on January 28, 2005. A pair of red-shouldered hawks were observed in the wash crossing Chicago Avenue, south of the site, during the May 2, 2005, site visit.

The Santa Ana River lies approximately 1.75 miles west of the project site. Southern Cottonwood Willow Riparian Woodland habitat occurs adjacent to the rivers edge. This vegetation community is dominated by cottonwood (*Populus fremontii*) and willow (*Salix sp.*). Vegetation in this area is maintained by surface water runoff from the nearby

mountains as well as discharges from stormwater drainages and canals. Tall trees in the area provide potential nest sites for raptors and many species of resident and migratory birds. Portions of the Santa Ana River contain designated critical habitat for least Bell's vireo and southwestern willow flycatcher.

#### **8.2.3.3.5 Disturbed/Ruderal Habitat**

Disturbed or ruderal habitat includes areas that contain mostly non-native plant species including ornamentals and ruderal exotics. Many non-native, weedy species have invaded areas previously and currently being developed for residential and industrial uses. The most common invasive plants observed included horseweed (*Conyza canadensis*), cheeseweed (*Malva parviflora*), and non-native grasses including foxtail (*Hordeum* sp.) and slender wild oat (*Avena barbata*).

Roadside ruderal habitats are found at the edges of farmed fields, in open fallow fields, or along railroad and highway rights-of-way with compacted substrates. These areas are typically kept free of vegetation (purposely or from continual disturbance) and used for farm equipment access, drainage ditches, utility line rights-of-way, or other activities related to industrial, residential, and agricultural use. Habitat along the railroad tracks typically contains ruderal vegetation communities where ground squirrels, hares, and other small mammals often construct underground burrows in the friable soils of the railroad berms. These burrows can subsequently provide shelter habitat for other wildlife, including lizards, snakes, amphibians, or burrowing owls (*Athene cunicularia*). Ruderal habitat occurs in the lot adjacent to the northern boundary of the site, along the railroad tracks directly west of the site and along the road shoulders of the southern extension of the gas line.

#### **8.2.3.3.6 Ornamental - Industrial, Commercial, Landscaped, and Residential Communities**

Non-native ornamental landscaping is present throughout the project area in association with previous and ongoing residential, industrial, and commercial land uses. Houses, streets, and parking lots tend to be planted with typical landscaping plants such as rose (*Rosa* sp.), olive (*Olea europea*), eucalyptus, pepper tree (*Schinus* sp.), and palm (*Washingtonia* sp.). The availability of water, shady cover, and insects makes the yards and landscaping around urban areas attractive to certain adaptable species, many of which are non-native. Dominant wildlife in these areas include common species (e.g., house sparrow, house finch, Northern mockingbird, western meadowlark (*Sturnella neglecta*), mourning dove, American crow, and American robin (*Turdus migratorius*). Mammal species include raccoon, opossum, house mouse (*Mus musculus*), California ground squirrels, and domestic or feral cats and dogs. These species tend to be highly adaptable, widespread, and common. Landscape and urban habitats dominate the project impact area along the gas line routes.

#### **8.2.3.4 Special-Status Species**

A list of special-status plant and animal species was compiled for the project area based upon the following references: the CDFG CNDDDB; California Native Plant Society's (CNPS) Electronic Inventory; a USFWS species list requested for San Bernardino and Riverside Counties; and project-specific onsite field surveys. A comprehensive list of special-status species is provided in Table 8.2-3. The list includes species listed as threatened or endangered that have special requirements under the FESA and California Endangered Species Acts (CESA) and other non-listed special-status species that could become listed in



the future. The table includes the habitat types that could support these species as well as the potential for occurrence in the project area.

Preliminary surveys, habitat evaluations, and aerial photographs suggest that the site is not located in a sensitive area. Table 8.2-3 presents the list of the special-status species that were evaluated as potentially occurring in the project area. Table 8.2-3 also includes special-status species whose habitat(s) and/or known distribution are present in the Highgrove Project area evaluated for potential impacts from construction and project operations. Other special-status species that were included on the USFWS, CDFG, and CNPS lists whose habitats or known distribution do not occur in the project area are included in Table 8.2-3, but were not evaluated further. Species with suitable habitat that may be seasonally present in the area and require further analysis (i.e. nesting surveys) to determine presence are also included in Table 8.2-3.

The reference information is based on known occurrences, historical records, or the presence of suitable habitat for any given life stage of a particular species. The known locations of special-status species identified in the CNDDDB records are shown in Figures 8.2-1 and 8.2-2.

Initial field surveys were performed by CH2M HILL biologists on January 12, and 28, and May 2, 2005. The qualifications of field biologists are provided in Appendix 8.2A.

#### 8.2.3.4.1 Special-Status Plants

Information acquired from the CNDDDB, CNPS, and other sources resulted in a list of 14 special-status plant species that have the potential to occur in the project area (Table 8.2-3, due to its size, this table has been moved to the end of this subsection). These species are associated with grasslands, chaparral, and riparian habitats that were once prevalent in the area but have since been lost to extensive agricultural and urban development. Habitat modification, weed control, and irrigation practices have forced these species into remnant pockets of marginal habitat.

According to CNDDDB records, only one special-status plant species, Parry's spineflower (*Chorizanthe parryi* var. *parryi*), was recorded historically along the proposed gas pipeline alignment (Figure 8.2-2). Parry's spineflower is a CNPS 3 species and requires sandy or rocky openings in chaparral and coastal scrub habitat.

Recently updated records from CNDDDB indicate there are no occurrences of special-status plant species in the proposed project work areas. The project site is extensively developed and lacks suitable habitat for any of the listed sensitive plant species. No special-status plants are expected to occur on the project site or on the gas alignment. The area where the spineflower was located is now used for agriculture. It is possible for it to still be found there. However, Parry's spineflower is covered under the Riverside County MSHCP and according to the MSHCP, sensitive plant surveys are not required in that particular area.

Project-specific field surveys were conducted during the appropriate blooming periods for the special-status plants to determine if they occur in the project impact areas and to further characterize the potential of available habitat in the vicinity. Potential habitat may be found along the ruderal margins of fields, roads, and railroad corridors where sandy soils and ruderal vegetation exists. The gas alignment traverses developed areas where focused surveys for sensitive plant species are not required due to the lack of suitable habitat (CDFG, 1983; Riverside County, 2003). Within these areas, the gas alignment will remain

within the existing roadways and road shoulders and will not disturb areas containing native vegetation.

#### **8.2.3.4.2 Special-Status Animals**

Information acquired from the CNDDB, USFWS, and other sources resulted in a list of 35 special-status wildlife species with the potential to occur within the project area (Table 8.2-3). Of these, only 17 have suitable habitat or known distribution within the project area.

Of the special status species with suitable habitat or known distribution in the area, only the coast horned lizard (*Phrynosoma coronatum blainvilli*) has been recorded in the project impact area (Table 8.2-3, Figure 8.2-1). The coast horned lizard is a California Species of Special Concern.

There is no suitable habitat on the project site for any of the federal or state listed species. The potential for occurrence is low due to the predominance of agriculture and highly developed industrial and residential uses that characterize the project area. The following paragraphs briefly describe the potential for special-status animals to occur in the project disturbance areas.

#### ***Fish Species***

The project area is not adjacent to significant natural aquatic features. Waterways in the project area include drainage canals, stormwater channels, and ephemeral washes. However, these drainages are tributaries to creeks and rivers that could provide habitat for the Arroyo chub (*Gila orcutti*), Santa Ana speckled dace, (*Rhinichthys osculus ssp. 3*), and the Santa Ana sucker (*Catostomus santaanae*).

To minimize potential impacts to downstream aquatic wildlife, AES Highgrove, LLC proposes to construct the gasline within the roadway as it crosses the drainages, canals, or washes within the area, either by using trenchless (jack-and-bore or horizontal directional drilling [HDD]) methods, or by trenching through the drainage during the dry season when most significant biological resources are absent.

**Arroyo chub** is a California Species of Concern. It occurs in natural or naturalized water courses in portions of the Los Angeles River system. It requires cool, flowing water and gravel or sandy substrates to breed. It has not been recorded in the developed lower portion of the Santa Ana River and would not be expected to occur in the ephemeral waterways crossed by the gas pipeline.

**Santa Ana sucker** is endemic to the Los Angeles Basin coastal streams; it is federally threatened and a California Species of Concern. The Santa Ana sucker generally lives in small, shallow streams, less than 7 meters in width and may be found in the lower portions of the Santa Ana River and would not be expected to occur in the ephemeral waterways crossed by the gas pipeline.

#### ***Reptiles***

The **coast horned lizard** (*Phrynosoma coronatum blainvilli*) is a California Species of Concern. It is generally found in inland areas and is restricted to areas with pockets of open microhabitat, such as those created by disturbance (e.g., floods, fire, roads, and grazed areas). There is little open area left within the highly developed, urbanized project area. The project

site and gasline are proposed for previously developed or paved areas, making it unlikely that project activities would impact this species.

### **Birds**

*Swainson's hawk*, a California threatened species, is a winter migrant found throughout Riverside and San Bernardino Counties. Swainson's hawk breeds in North America from March through September. Swainson's hawks often nest in trees adjacent to crop fields (e.g., alfalfa, hay, and row crops) where prey species provide forage. Swainson's hawks are known to forage up to 10 miles from a nest tree. No nest locations have been recorded within the project area however potential nest trees are present along the perimeters of fields, in residential landscape areas, and in the riparian habitats west and south of the site. Most of the trees near the project site and along the gas line are landscape shade trees associated with residences and farms. There are no CNDDDB records of Swainson's hawk nesting sites in the project area.

*Western burrowing owl*, a federal and California species of concern, could potentially forage in agricultural fields and nest in underground burrows in the project area. Although intensive development and agricultural practices make the habitat marginally suitable for nesting, burrowing owls may find nesting opportunities along the margins of agricultural fields, in open fallow fields, or along the railroad corridor where ground squirrel burrows provide nesting sites and shelter. Most burrowing owls in this region are residents; but some owls are migratory, spending winters in other areas of Southern California or Mexico. Burrowing owls use mammal burrows dug by ground squirrels, skunks, and hares for shelter and nesting. Appropriate-sized burrows are nearly absent from agricultural areas due to frequent soil disturbance and pest control measures. Ground squirrels are often poisoned in agricultural and industrial areas reducing the potential for burrowing owls. Although no active nest sites appeared in the CNDDDB records within 1 mile of the project area and no owl sign was observed during reconnaissance-level surveys of the project area, additional nesting-season surveys will be conducted in potentially suitable areas prior to construction (e.g., the railroad berm). Dispersing owls may later colonize burrows in suitable habitats that have not been used before.

*California horned lark* (*Eremophila alpestris*), and *tricolored blackbird* (*Agelaius tricolor*) could potentially forage in the agricultural fields within the project area. Horned larks are a California species of concern and are resident birds in California, where they are often associated with open areas with low vegetation. This species is a ground nester whose nesting habitat would be limited to pastures, as well as the margins of field and transportation corridors. No horned larks were observed during field surveys. Tricolored blackbird nesting colonies are associated with densely vegetated wetland areas, including stock ponds and other artificial wet areas. The detention basin south of the project area contains marginal potential nesting and forage areas for tricolored blackbirds.

*Coastal California gnatcatcher* (*Poliophtila californica californica*) is listed as a federally threatened species and California species of concern. The preferred plant structure in gnatcatcher territories is described as low growing with moderate gaps in the shrub canopy. The gnatcatcher is a resident species strongly associated with Coastal and Riversidean sage scrub habitats, particularly those dominated by California sagebrush stands on mesas, gently sloping areas, and along the lower slopes of the coast ranges (Atwood, 1990). This bird will also use chaparral, grassland, and riparian habitats where they occur adjacent to

sage scrub both during the breeding and non-breeding periods, especially during dispersal of young birds after fledging and during the hot summer months. Suitable gnatcatcher habitat is present within the coastal sage scrub community approximately one-half mile northwest of the AES site. In addition, the riparian habitats found 0.5 mile south where the gas line crosses Springbrook Wash and 1.75 miles west along the banks of the Santa Ana River may be used for foraging.

**Southwestern willow flycatcher** (*Empidonax traillii extimus*) is a California and federally endangered species. This species is generally restricted to riparian woodlands along streams and rivers with mature, dense stands of willows, cottonwoods or smaller spring fed or boggy areas with willows or alders. Critical habitat for southwestern willow flycatcher is found along portions of the Santa Ana River, approximately 1.75 miles west of the project site. Due to the highly disturbed nature of the riparian habitat where gas pipeline crosses Springbrook Wash, it is highly unlikely that nesting would occur in this area.

**Least Bell's vireo** (*Vireo bellii ssp pusillus*) is a California and federally endangered species. Least Bell's vireo primarily occupy riverine riparian habitats that feature dense cover within 1-2 meters of the ground and a dense, stratified canopy along water or dry parts of intermittent streams. Least Bell's vireo typically arrive in southern California in late March to early April to begin breeding activities. Nesting territories range from 0.5 to 4.0 acres and are established in riparian habitat, usually in dense willow-dominated thickets. Potential vireo nesting and foraging habitat occurs in the riparian areas approximately 1.75 miles northwest of the proposed AES site within least Bell's vireo critical habitat along the banks of the Santa Ana River.

### **8.2.3.5 Biological Surveys**

Biological resources evaluated for project impacts include vegetation communities, wetlands, wildlife, and wildlife habitats in all the temporary and permanent project impact locations. The surveyed areas include the proposed 9.8-acre plant site, the temporary laydown area, an area one mile (radius) out from the plant site, and areas within 1,000 feet of either side of the proposed natural gas pipeline route. Construction of the gas pipeline requires a construction zone of 50 to 75 feet; therefore, a 2,150-foot wide corridor was evaluated along the route. The field surveys focused on a 75-foot construction zone along either side of the pipeline route and immediate construction areas on the site and laydown area. The general project vicinity is dominated by industrial and agricultural use, so survey efforts concentrated on "edge" areas where natural habitat or native species may persist. The pipeline route traverses residential, commercial, agricultural, and industrial areas and would be installed within the existing roadways and road shoulders

The field surveys were aided by aerial photographs, which helped identify land uses. The presence, or potential presence, of sensitive biological resources was determined from information gathered during field surveys conducted for the project, published and unpublished literature, and natural resource agency databases.

Biological surveys for the project area and general vicinity were performed by biologists from CH2M HILL on January 12 and 28 and May 2, 2005. Surveyors' qualifications are provided in Appendix 8.2A. Additional surveys will be conducted for burrowing owls during the nesting and breeding seasons.

## 8.2.4 Environmental Analysis

Potential direct and indirect impacts to biological resources were evaluated to determine the permanent and temporary effects of project construction, operation, maintenance, and decommissioning of the Highgrove Project and supporting facilities. A summary of potential project impacts is presented in Table 8.2-4.

### 8.2.4.1 Standards of Significance

Impacts on biological resources are considered significant if one or more of the following conditions could result from implementation of the proposed project:

- Substantial effect, reduction in numbers, restricted range, or loss of habitat for a population of a state or federally listed threatened or endangered species.
- Substantial effect, reduction in numbers, restricted range, or loss of habitat for a population of special-status species, including fully protected, candidate proposed for listing, CSC, and certain CNPS list designation.
- Substantial interference with the movement of any resident or migratory fish or wildlife species.
- Substantial reduction of habitat for native fish, wildlife, or plants.
- Substantial disturbance of wetlands, marshes, riparian woodlands, and other wildlife habitat.
- Removal of trees designated as heritage or significant under County or local ordinances.

### 8.2.4.2 Potential Impacts of Construction and Operation of Highgrove Project Site and Temporary Construction Laydown Area

#### 8.2.4.2.1 Vegetation Removal and Site Preparation

Construction of the Highgrove project site would permanently remove 4 acres of previously disturbed ruderal habitat (Figure 8.2-3a). The quality of the land as wildlife habitat is marginal but could be used seasonally by foraging birds and small mammals.

Removal of non-native or degraded native habitats may result in direct mortality to wildlife using the site, such as ground squirrels. Suitable nesting habitat occurs for songbirds in the trees adjacent to the site. Nesting areas for raptors may also be found in the riparian habitat areas along the gas pipeline. The loss of active bird nests or young is regulated under the federal Migratory Bird Treaty Act and California Fish and Game Code 3511. The loss of other common wildlife such as ground squirrels, rats, garter snakes using the site would be minimized by using specific protection measures in the project area (see Section 8.2.5 that discusses the protection measures). The loss of common wildlife from vegetation removal at the site would not represent a significant impact under CEQA, as these species are regionally common.

**TABLE 8.2-4**

Summary of Permanent and Temporary Project Impacts on Biological Resources During Construction.

Location	Project Work	Construction Zone Size	Time Requirements	Habitat Type	Sensitive Biological Resources	Impacts	
						Temporary	Permanent
Power plant site	Grading for footprint construction	9.8 acres	Start Second Quarter 2007	Previously developed area	Ruderal field may provide marginal foraging for songbirds and mammals.	None	9.8 acres of previously developed habitat
Access roads (main and emergency access)	Construction access will be from Taylor Street	0 acres	Start Second Quarter 2007	Existing paved and dirt roads	None	None	None
Construction laydown area	Construction laydown and parking areas will be located on the former plant site, south of the construction area	5 acres	Start Second Quarter 2007	Previously developed area	None	None	5 acres of previously developed habitat
Natural gas pipeline	Open pipeline trench	7 miles of trench for 12-inch pipeline.	Start Third Quarter 2007	Paved road and road shoulders	None.	None	None
Potable water supply line	Existing City supply line	N/A	Start Third Quarter 2007	N/A	None	None	None
115-kV transmission lines	Transmission tower footings, construction and maintenance	115-kV is 600 feet long	Start Third Quarter 2007	Previously developed tank site	Ruderal field may provide marginal foraging for songbirds and mammals.	None	The transmission lines are located entirely on the project site and will be part of the permanent impacts from site development.

#### **8.2.4.2.2 Cooling Tower Drift**

Cooling tower drift is the fine mist of water droplets that escape the cooling tower's mist eliminators and emitted into the atmosphere. Cooling towers concentrate the particulates (total dissolved solids) during the cooling process and produce a mist that contains higher total dissolved solids or salt than potable water typically contains. These salts can physically damage a leaf cell, which affects the photosynthetic ability of plants. Other effects include blocking the stomata (leaf pores) so that normal gas exchange is impaired, as well as affecting leaf adsorption and solar radiation reflectance. These effects can reduce productivity in crops, trees, and sensitive special-status plant species in a deposition area.

Studies performed by Lerman and Darley (1975) concluded that particulate deposition rates of 365 grams per square meter per year ( $\text{g}/\text{m}^2/\text{year}$ ) caused damage to fir trees, but rates of 274  $\text{g}/\text{m}^2/\text{year}$  and 400 to 600  $\text{g}/\text{m}^2/\text{year}$  did not cause damage to vegetation at other sites. Pahwa and Shipley (1979) exposed vegetation (corn, tobacco, and soybeans) to varying salt deposition rates to simulate drift from cooling towers that use saltwater (20 to 25 parts per thousand) in the circulation water. Salt stress symptoms on the most sensitive crop plants (soybeans) were barely perceptible effects at a deposition rate of 2.98  $\text{g}/\text{m}^2/\text{year}$  (Pawha and Shipley, 1979).

Assuming a particulate deposition rate of 2 centimeters per second and a maximum salt concentration of 0.0895 microgram per cubic meter (the cooling tower particulate matter deposition rate), the expected deposition rate is 0.056  $\text{g}/\text{m}^2/\text{year}$ , which is significantly less than levels expected to cause barely perceptible effects to the most sensitive crop plants.

#### **8.2.4.2.3 Cooling Water Supply and Effluent**

Water for the Highgrove power plant operations will be supplied by an onsite well. Since the Highgrove Project will acquire water from an onsite well, there will be no mechanism to affect fish or other biota from securing water for operations. Process wastewater will be discharged to the SARI brine line.

#### **8.2.4.2.4 Noise and Lights from Plant Operations**

The AES site is currently zoned M2 (Industrial). The project site is adjacent to several industrial facilities. These facilities have standard industrial lighting and significant noise. Operation of the plant would produce some noise, as described in Subsection 8.5. Operational noise levels are described in detail in Subsection 8.5.

Generally, noise from power plant operations would not adversely impact wildlife, as wildlife usually become accustomed to low-level, routine background noise.

Bright night lighting could disturb resident wildlife (e.g., nesting birds, foraging mammals, and flying insects) in areas where suitable habitat exists. During migration, night lighting may attract migratory birds. If night lighting is required, the lights will be pointed down to minimize impacts to wildlife.

#### **8.2.4.2.5 Collision and Electrocution Hazard to Birds**

The project would involve the installation of about 600 feet of new electric transmission lines that could potentially result in bird collisions. The transmission lines would connect the plant to the adjacent SCE Substation. There is also the potential for birds to collide with the 80-foot tall exhaust stacks. Most bird collisions involve nocturnal migrants flying at night in inclement weather and low-visibility conditions, colliding with tall guyed television or radio

transmission towers (CEC, 1995; Kerlinger, 2000). Migratory birds generally fly at an altitude that would avoid ground structures, except when crossing over topographic features (e.g., ridge tops) or when inclement weather forces them down closer to the ground. There are no topographic or ecological features that would attract birds to this location or “funnel” them into the vicinity of exhaust stacks or other elevated features of the project. Because of the relatively low structure height and lack of guy wires, the potential for bird collisions with stacks, poles, electric conductor wires, structures, and towers of the project is considered less than significant.

Large raptors can be electrocuted by transmission lines when a bird’s wings simultaneously contact two conductors of different phases, or a conductor and a ground. The installation of transmission lines or poles will be constructed according to “raptor-friendly” guidelines (APLIC, 1996). The 115-kV electrical transmission lines for the project will be constructed with at least a 5.5-foot span between conductor wires. Due to the short distance and low height, these additional lines would not increase avian electrocutions in the area. Risk of electrocution is not expected to be significant since the area does not attract large numbers of birds. In addition, the “raptor-friendly” design would reduce potential impacts to less than significant.

#### **8.2.4.2.6 Special-Status Species**

No threatened or endangered plants or animals were recorded from CNDDDB in the project boundaries or observed during the field surveys. Only two records of historical observations were included in the CNDDDB for the one-mile radius around the project site and within 2,000 feet of the gas pipeline. The following paragraphs describe the potential for the evaluated species to occur within the project impact area.

Although no burrowing owls or burrowing owl sign were observed during the 2005 field surveys, the railroad berms west of the site contains small mammal burrows that could provide suitable nesting sites for burrowing owls. The burrowing owl nesting season is typically from February 1 through August 15. Preconstruction field surveys (conducted under CDFG guidelines) to identify active nest sites will be conducted prior to construction activities. If active nest sites are found, protection measures will be implemented (see Subsection 8.2.5).

The coast horned lizard was not observed during the 2005 field surveys and only one historical record exists with the CNDDDB within the one-mile radius of the project site. The project site is highly developed and does not contain suitable habitat for the coast horned lizard; therefore, no impacts to this species are expected to occur.

#### **8.2.4.2.7 Wetlands and Waters of the U.S.**

Waters of the U.S. occur within the project impact area. The Riverside Canal Aqueduct and the Santa Ana River may be affected during construction at the AES site. Construction activities such as grading may cause sediment to be washed into surface waters during storm events that could impact water quality and may represent a significant adverse impact on biological resources using those waterways.

A Stormwater Pollution Prevention Plan (SWPPP) would be required as part of compliance with a construction National Pollutant Discharge Elimination System (NPDES) permit. See Appendix 8.14A, which contains a draft of the Construction SWPPP. The permit specifies



BMPs to avoid sediment runoff and erosion that would cause water quality degradation. With implementation of the SWPPP, the impacts to biological resources using waterways would be less than significant. Silt fencing would be installed along the project boundaries near waterways to keep wildlife out of the work areas and prevent sediment from depositing in the drainages. An onsite biological monitor would be required during any and all ground disturbance, monitors would move wildlife observed during construction activities to prevent death or injury.

The project would not cause loss or fill of any wetlands on the project site or laydown area.

There would be no operational cooling water discharge from the Highgrove Project, as the wastewater will be sent to the SARI brine line, and therefore, no adverse impact to wetlands or water quality is expected to occur from this source.

#### **8.2.4.3 Potential Impacts of Natural Gas Pipeline Construction and Operation**

The proposed gas pipeline alignment is approximately 7 miles long and would be installed within the existing paved roadway and road shoulders through industrial, residential, commercial, and agricultural areas.

The primary method of construction includes excavation of an open trench approximately 4 feet deep and 3 to 7 feet wide, depending on site-specific conditions. The specific location of the pipeline will be determined based upon the avoidance of any sensitive receptors, ability to obtain right-of-way, and the location of existing pipelines, but will remain within the existing roadway surface and shoulder. A temporary construction corridor 12 feet wide will be used to store the excavated soil, provide access for equipment and vehicles, and space for welding the pipeline prior to installation and backfill. The pipeline installation would require trench excavation and would generate fugitive dust. Water will be applied to the site for dust control during construction.

The pipeline will require pressure testing after construction to ensure welds are tight and remove any accumulated dust or welding residue from the pipeline. To do this, the pipe is filled with a large volume of water and pressurized. After use, this water will be tested and discharged into the local storm drain per a permit obtained by SoCalGas from the appropriate water quality control board. If the water does not pass the required testing, it will be disposed of offsite.

##### **8.2.4.3.1 Special-Status Species**

With the exception of the short segment of pipeline that will follow the Riverside Canal from the plant site to Main Street, construction of the gas pipeline is confined to paved roadways and urban road shoulders adjacent to commercial, industrial, residential, and agricultural areas. Potential impacts on biological resources are minimized by locating the pipeline in previously developed areas. However, localized sections of the pipeline route are adjacent to marginal habitat that may support special-status species. Burrowing owls could nest along the railroad berms where rodent burrows may be present. Migrant least Bell's vireo and southwestern willow flycatcher may use the riparian area along Springbrook Wash as a foraging site.

Unintentional disturbance to nesting birds could result from construction activities that interfere with the breeding and foraging of these species. Mortality of eggs, nestlings, or

juveniles may occur if nests are established in areas adjacent to the project activities. If active nest sites are found within 200 feet (500 feet for raptors) of the project activities, approved CDFG protection measures will be implemented. Protection measures may include implementation of environmental awareness training, preconstruction surveys, and seasonal avoidance as described in Subsection 8.2.5 and would reduce impacts to nesting birds to less-than-significant. General nesting bird surveys shall be performed for all species that may have active nests within 200 feet (or 500 feet for raptors) of construction activities. If any active nests are found during the surveys, protective measures shall be taken to restrict construction activities that may potentially cause significant disruptions to nesting behavior.

#### **8.2.4.3.2 Wetlands and Waters of the U.S.**

No vernal pools were observed during the wet season surveys and none have been recorded in the area. The project would not result in the loss or fill of any wetlands as identified by the USACE.

Waters of the U.S. occur within the project impact area. The Riverside Canal Aqueduct, Gage Canal, and Springbrook Wash, would be crossed during installation of the gas pipeline. Construction activities occurring within these areas would generally remain within the existing paved roadways or rights-of-way. Best management practices would be employed to ensure sediment is not washed into surface waters during excavation, boring, or trenching activities.

Springbrook Wash, as well as the minor irrigation ditches and drainages, are generally ephemeral and are often dry for 4 to 6 months of the year during the summer and fall. Construction of the pipeline could potentially disrupt wildlife species that may forage along the drainage canals or nest within the riparian areas along this wash. Construction of that segment of the gas pipeline that crosses Springbrook Wash or Gage Canal would be performed either by using trenchless construction methods (e.g., jack-and-bore or HDD), or by trenching through the drainage from the existing roadway surface during the dry season.

A Streambed Alteration Agreement from CDFG, with conditions to reduce potential adverse impacts to wildlife and water quality downstream of the crossing, would be required to cross water features in the area. Temporary potential impacts to aquatic species downstream of the construction area could also occur if inadvertent returns of drilling mud occurs (most often referred to as a “frac-out”) and escapes through a fissure in the soil structure to the ground surface. The drilling mud (normally bentonite) is a non-toxic clay material often used as an impervious layer in wetland construction and by farmers as a soil enhancement. When drilling mud enters a waterway, it can smother benthic invertebrates, aquatic plants, fish eggs, and young fish. If the HDD construction method is used, a contingency plan will be developed for HDD activities prior to construction. The contingency plan would outline how an inadvertent return of drilling mud would be minimized, contained, and cleaned. It would also provide emergency contact numbers and a spill response team to contact in case of excessive spills. The pipeline will require pressure testing after construction to ensure welds are tight and remove any accumulated dust or welding residue from the pipeline. To do this, the pipe is filled with a large volume of water and pressurized. After use, this water will be tested and discharged into the local storm drain per a permit obtained by SoCalGas from the appropriate water quality control board. If the water does not pass the required testing, it will be disposed of offsite. Therefore no impacts are anticipated.

#### **8.2.4.4 Conflicts with Regional Habitat Conservation Plans**

There are no countywide or regional HCPs in San Bernardino County. The southern section of the proposed route for the gas pipeline crosses into Riverside County. Biological resources in this area are addressed in the Western Riverside County MSHCP. There are no preserves or limitations associated with this plan that are affected by the project. Therefore, construction of the project would not conflict with goals of any HCP or other regional conservation plan.

#### **8.2.4.5 Cumulative Impacts**

The Highgrove Project would not cause any new habitat disturbance from construction of the site. Because the proposed site was previously developed and is located in an industrial area, no significant individual or cumulative impacts would occur.

The associated gas pipeline for the project would be located in areas that have been previously disturbed and would not result in the permanent loss of habitat or cause significant adverse impacts to biological resources individually or cumulatively.

### **8.2.5 Proposed Mitigation and Monitoring**

The following subsections describe proposed mitigation intended to avoid and minimize effects or compensate for potential adverse effects of the project on biological resources, and to monitor and document the effectiveness of mitigation and protection measures.

#### **8.2.5.1 General Project Construction**

The following measures would be implemented in construction areas:

- Provide worker environmental awareness training (WEAT) for all construction personnel that identifies the sensitive biological resources and measures required to minimize project impacts during construction and operation.
- Avoid sensitive habitats and species during construction by developing construction exclusion zones and fencing around sensitive areas.
- Conduct additional preconstruction surveys for sensitive species in potential impact areas during the spring before construction begins, including burrowing owls, or breeding birds if vegetation removal during the nest season is unavoidable.
- Preconstruction surveys would be conducted prior to nesting season to remove potential nest substrate (shrubs, trees as necessary, and tall vegetation) and install silt fence to keep snakes and ground dwellers out of the site.

#### **8.2.5.2 Worker Environmental Awareness Program (WEAP)**

A site-specific WEAP will be designed to inform all onsite personnel of the sensitive biological resources, restrictions, protection measures, and individual responsibilities associated with the project. The WEAP will be administered in an onsite and/or classroom setting and may include an oral, video, or written materials presentation. The presentation would include the types of construction activities that could impact biological resources and the measures developed to avoid such impacts. It would also include appropriate contact procedures and personnel information. The program would include information regarding encounters with wildlife and dealing with situations involving biological resources. Special

emphasis will be placed on explaining the protection measures developed for the project and the consequences of noncompliance

### **8.2.5.3 Mitigation and Protection Measures for Special-Status Species**

Special-status species are not likely to occur on the project site or on the highly developed portions of the gas alignment that extend offsite. Specific mitigation/protective measures were developed that focus on providing environmental awareness training, avoiding sensitive habitats, and avoiding seasonal disruption of particular special-status species critical life history events. The following are mitigation and protective measures that would be implemented if sensitive species are found during preconstruction surveys and construction monitoring activities.

#### **8.2.5.3.1 Nesting Bird Protection Measures**

The following protection measures will be implemented during construction activities.

1. If necessary, clear vegetation that could be used as nesting substrate in impact areas prior to February 1 before the bird breeding season or after birds have fledged from the nest (August 15th or later).
2. Conduct preconstruction nesting surveys in the spring to determine if any habitat in the construction areas is occupied by nesting birds. Implement mitigation measures that protect nesting birds by coordinating work activities during non-nesting periods or ceasing work within 200 feet (500 feet for raptors) of an active bird nest or monitoring the nest during activities to determine if disturbance is adversely affecting reproduction. Preconstruction field surveys (conducted under CDFG guidelines) to identify active burrowing owl nest sites will be conducted prior to construction activities. If active nest sites are found, protection measures will be implemented.

#### **8.2.5.3.2 Foraging and Migratory Raptors and Waterbirds**

Proposed protection measures also include:

1. Design “raptor-friendly” electric transmission lines, as described in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996* (APLIC, 1996) with conductor wire spacing greater than the wingspans of large birds (43 inches on the vertical and 60 inches on the diagonal) to prevent electrocutions.
2. Provide safety lighting that points downward to reduce avian collisions.

#### **8.2.5.3.3 Aquatic Protection Measures**

The following protective measures are proposed to avoid impacts to aquatic resources:

1. Avoid the Riverside Canal, Gage Canal, Springbrook Wash, and downstream reaches of the Santa Ana River habitats, with modifications to gas pipeline design that include use of a trenchless construction method (HDD or jack-and-bore) or constructing during the dry season.
2. Obtain a Streambed Alteration Agreement for activities (that includes protection measures for biological resources downstream). Develop a contingency plan for the potential inadvertent return of drilling mud into waterways during drilling activities.
3. Implement extensive erosion control in the temporary impact areas, especially near drainages and waterways.

## 8.2.6 Involved Agencies and Agency Contacts

Involved agencies and agency contacts are listed in Table 8.2-5.

**TABLE 8.2-5**  
Contacts for the Highgrove Project

<b>Biological Resource Agency</b>	<b>Person Contacted</b>	<b>Issue</b>	<b>Phone</b>
U.S. Fish and Wildlife Service	Nancy Ferguson	Federal threatened or endangered species	760-431-9440 ext 244
California Department of Fish and Game	Curt Taucher	California threatened or endangered species	562 596-4212
California Department of Fish and Game; 1600	Sheila Aguinaldo 4665 Lampson Avenue, Suite J Los Alamitos, CA 90720	Streambed Alteration Agreement	562 430-7212
Regional Water Quality Control Board – Riverside County	Michael Roth	RWQCB 401 permit	951-320-2027
Regional Water Quality Control Board – San Bernardino County	Adam Fischer	RWQCB 401 permit	951-320-6363
U.S. Army Corps of Engineers	Jerry Salas	Waters of the U.S. and wetland impacts	213-452-3425

## 8.2.7 Required Permits and Permit Schedule

Required permits and permit schedule are listed in Table 8.2-6.

**TABLE 8.2-6**  
Required Permits and Schedule

<b>Permit/Authorization</b>	<b>What Is Required to Complete Consultations</b>	<b>When Application Needs to be Submitted</b>
Biological Opinion pursuant to Section 7 of the ESA, issued by USFWS Letter of Concurrence, from CDFG	Not needed because federally listed plant or animal species are not impacted.	N/A
CDFG Streambed Alteration Agreement required for pipeline construction across riparian area	Construction drawings of water crossing(s), completion of CEQA compliance documentation.	120 days prior to the start of pipeline construction
Clean Water Act Section 404	Not needed if construction remains within existing roadways or if HDD is used to drill beneath the channels. However, would be required if gas line is installed by trenching through the riparian areas during the dry season.	180 days prior to the start of pipeline construction

**TABLE 8.2-6**  
Required Permits and Schedule

Permit/Authorization	What Is Required to Complete Consultations	When Application Needs to be Submitted
Water Quality Certification	Not needed if construction remains within existing roadways or if HDD is used to drill beneath the channels. However, would be required if gas line is installed by trenching through the riparian areas during the dry season.	Mar 2007
Riverside County MSHCP Consistency Determination	Required for all riparian crossings.	Mar 2007

## 8.2.8 References

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**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
<b>Plants</b>						
Ash-gray Indian paintbrush	<i>Castilleja cinerea</i>	FT, CNPS List 1B	June-Aug	Mojavean desert scrub, meadows and seeps, pebble (pavement) plain, pinyon and juniper woodland, upper montane coniferous forests (clay openings)	Unlikely to occur due to the highly developed nature of the project area and lack of suitable habitat	
Bear Valley sandwort	<i>Arenaria ursina</i>	FT, CNPS List 1B	May-Aug	Pebble (pavement) plain, pinyon and juniper woodland in mesic and rocky areas	Unlikely to occur due to the highly developed nature of the project area and lack of suitable habitat	
California taraxacum	<i>Taraxacum californicum</i>	FE, CNPS List 1B	May-Aug	Occurs in meadows and seeps at elevations of 1620-2800 meters	Unlikely to occur due to the highly developed nature of the project area and lack of suitable habitat	
Coulter's Goldfields	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	CNPS:1B	Feb-June	Occurs in coastal salt marshes, playas, valley and foothill grassland, and vernal pools. Usually found on alkali soils in playas, sinks, and grasslands	Unlikely to occur due to the highly developed nature of the project area and lack of mesic, wetland areas.	
Cushenbury buckwheat	<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	FE, CNPS List 1B	May-Aug	Occurs in Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodlands in carbonate soils	Unlikely to occur due to the highly developed nature of the project area and lack of suitable habitat	
Davidson's saltscale	<i>Atriplex serenana</i> var. <i>davidsonii</i>	CNPS:1B	May-Oct	Found in association with association with the alkali vernal pools, alkali annual grassland, alkali playa, and alkali scrub components of alkali vernal plains	Unlikely to occur in the project area due to lack of suitable habitat.	
Heart-leaved pitcher sage	<i>Lepechinia cardiophylla</i>	CNPS:1B	Apr-Jul	Occurs in closed-clone coniferous forest, chaparral and cismontane woodland at elevations of 550 to 1,370 m	Unlikely to occur in the project area due to lack of suitable habitat.	Restricted to the Santa Ana Mountains in Orange and Riverside counties, Iron Mountain in San Diego County and the coastal mountains of northern Baja California



**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
Little mouse tail	<i>Myosurus minimus</i>	CNPS 3	Mar-May	Occurs in association with vernal pools and within the alkali vernal pools and alkali annual grassland components of alkali vernal plains	Unlikely to occur in the project area due to lack of suitable habitat.	
Mojave tarplant	<i>Hemizonia (Deinandra) mohavensis</i>	CE, CNPS 1B	Jul-Oct	Associated with chaparral and coastal/riparian scrub communities with mesic soils.	Unlikely to occur in the project area due to lack of suitable habitat.	Mojave tarplant is believed to be extirpated in San Bernardino County.
Nevin's barberry	<i>Berberis nevinii</i>	FE/CE CNPS:1B	Mar-Apr	Found in coarse soils and rocky slopes in chaparral and gravelly wash margins in alluvial scrub.	Unlikely to occur in the project area due to lack of suitable habitat.	Nevin's barberry is known in only four areas in Riverside County: Vail Lake, Riverside, Temecula and Aguanga.
Parish's brittlescale	<i>Atriplex parishii</i>	CNPS:1B	Jun-Oct	Found in alkaline habitats in association with alkali vernal pools, alkali annual grassland, alkali playa, and alkali scrub components of alkali vernal plains.	Unlikely to occur in the project area due to lack of suitable habitat.	Parish's brittlescale is currently known only from the western Riverside County
Parish's checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	FC, CNPS List 1B	June-Aug	Occurs in chaparral, cismontane woodland, and lower montane coniferous forests at elevations of 1000-2500 meters	Unlikely to occur due to the highly developed nature of the project area and lack of suitable habitat	
Parish's gooseberry	<i>Ribes divaricatum</i> var. <i>parishii</i>	CNPS 1B	Feb-April	Associated with riparian woodlands.	Unlikely to occur due to the low quality nature of the riparian habitat along the gas alignment.	
Parry's spineflower	<i>Chorizanthe parryi</i> var. <i>parryi</i>	CNPS 3	Apr-June	Occurs within the alluvial chaparral and scrub of the San Gabriel, San Bernardino and San Jacinto Mountains, at elevations of 100 to 1,300 m above msl.	Low potential to occur due to the highly developed nature of the project area	Known from the flats and foothills of the San Gabriel, San Bernardino and San Jacinto.
Pedate checker-mallow	<i>Sidalcea pedata</i>	FE, CE CNPS List 1B	May-Aug	Occurs in meadows and seeps and pebble (pavement) plains at elevations of 1600-2500 meters	Unlikely to occur due to the highly developed nature of the project area and lack of suitable habitat	
San Bernardino bluegrass	<i>Poa atropurpurea</i>	FE, CNPS List 1B	Apr-Aug	Occurs in meadows and seeps at elevations of 1360-2455 meters	Unlikely to occur due to the highly developed nature of the project area and lack of suitable habitat	

**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
San Bernardino Mountains bladderpod	<i>Lesquerella kingii</i> ssp. <i>bernardina</i>	FE, CNPS List 1B	May-Jun	Occurs in lower montane coniferous forests and pinyon and juniper woodlands, generally in carbonate soils at elevations of 1850-2700 meters	Unlikely to occur due to the highly developed nature of the project area and lack of suitable habitat	
San Diego ambrosia	<i>Ambrosia pumila</i>	FE, CNPS List 1B	May-Sep	Occurs in chaparral, coastal scrub, valley and foothill grassland, vernal pools (often in disturbed areas) at elevations of 20-415 meters	Unlikely to occur due to the highly developed nature of the project area and lack of suitable habitat	
San Jacinto Valley crowscale	<i>Atriplex coronata</i> var. <i>notatior</i>	FE CNPS 4	Apr-Jun	Occurs primarily in floodplains (seasonal wetlands) dominated by alkali scrub, alkali playas, vernal pools, and, to a lesser extent, alkali grasslands.	Unlikely to occur in the project area due to lack of suitable habitat.	
Santa Ana River woolly-star	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	CE, FE, CNPS 1B	Jun-Sep	Found only within open washes and early-successional alluvial fan scrub on open slopes above main watercourses on fluvial deposits.	Unlikely to occur due to lack of optimal habitat and intensive development in the project area.	Occurs along the Santa Ana River and Lytle and Cajon Creek flood plains from the base of the San Bernardino Mountains in San Bernardino County southwest along the Santa Ana River through Riverside County.
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	FE, CE, CNPS List 1B	Apr-Jun	Occurs in alluvial fans in chaparral, cismontane woodland, coastal scrub habitats.	Unlikely to occur in areas of direct impact, May occur in the coastal scrub habitats within the Jurupa Hills and Sycamore Canyon.	
Slender-petaled mustard	<i>Thelypodium stenopetalum</i>	FE, CE	May-Aug	Occurs in meadows and seeps in alkali and mesic soils.	Unlikely to occur in the project area due to lack of suitable habitat.	

**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
Smooth tarplant	<i>Centromadia pungens</i> ssp. <i>laevis</i>	CNPS 1B	Apr-Sept	Occurs in a variety of habitats including alkali scrub, alkali playas, riparian woodland, watercourses, and grasslands with alkaline affinities.	Unlikely to occur in the project area due to lack of suitable habitat.	Found in southwestern California and northwestern Baja California, Mexico at low elevations.
Southern mountain wild buckwheat	<i>Eriogonum kennedyi</i> var. <i>austromontanum</i>	FT	Jul-Sept	Occurs in lower montane coniferous forests in gravelly or pebbled plains.	Unlikely to occur in the project area due to lack of suitable habitat.	
Spreading navarretia	<i>Navarretia fossalis</i>	FT	Apr-Jun	Occurs in chenopod scrub, marshes and swamps, playas, and vernal pools.	Unlikely to occur in the project area due to lack of suitable habitat.	
Threadleaf brodiaea	<i>Brodiaea filifolia</i>	FT/CE CNPS:1B	May-Aug	Occurs on gentle hillsides, valleys, and floodplains in semi-alkaline mudflats, vernal pools, mesic southern needlegrass grassland, mixed native-nonnative grassland and alkali grassland plant communities in association with clay, loamy sand, or alkaline silty-clay soils.	Unlikely to occur in the project area due to lack of suitable habitat.	Endemic to southwestern cismontane California from near sea level to 600 meters (2,000 feet).
Vail Lake ceanothus	<i>Ceanothus ophiochilus</i>	FT/CE CNPS:1B		Found in dry habitats along ridgetops and north to northeast-facing slopes in chamise chaparral. Restricted to shallow soils originating from ultra-basic parent rock and deeply weathered gabbro, which are both phosphorous-deficient.	Unlikely to occur in the project area due to lack of required habitat.	
<b>Insects and Crustacea</b>						
Delhi sands flower-loving fly	<i>Rhaphiomidas terminatus abdominalis</i>	FE	RES	Tied to fine, sandy soils, often with wholly or partly consolidated dunes referred to as the "Delhi" series. Typically found in relatively intact, open, sparse, native habitats with less than 50% vegetative cover.	Unlikely to occur due to the lack of dune habitat.	Endemic to the Colton Dunes The adult stage can only be found on the surface for a few days during the late summer, however the larval stages are present year-round in the soil.

**TABLE 8.2-3**  
**Special-Status Species Potentially Occurring in the Highgrove Project Area**

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
Riverside fairy shrimp	<i>Streptocephalus wootoni</i>	FE	RES	Restricted to deep seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds.	Unlikely to occur in the project area due to lack of vernal pool or other ponding habitat.	
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT	RES	Prefers cool-water pools that have low to moderate dissolved solids, are less predictable, and often short lived.	Unlikely to occur in the project area due to lack of vernal pool or other ponding habitat.	
<b>Fish</b>						
Arroyo chub	<i>Gila orcutti</i>	CSC	RES	Prefer slow moving or backwater sections of warm to cool streams with substrates of sand or mud. The depth of the stream is typically greater than 40 centimeters.	Unlikely to occur within the project impact area. However, likely to occur in the Santa Ana River tributaries.	Spawning typically begins in late December and can extend into April.
Santa Ana speckled dace	<i>Rhinichthys osculus ssp. 3</i>	CSC	RES	Permanent streams and rivers with cool, flowing rocky-bottomed washes are the primary habitats. Summer water temperatures usually range from 17-20 degrees Celsius and are typically maintained by outflows of cool springs	Unlikely to occur within the project impact area. However, likely to occur in the Santa Ana River.	Currently, the dace has a limited distribution in the headwaters of the Santa Ana and San Gabriel rivers.
Santa Ana sucker	<i>Catostomus santaanae</i>	FT, CSC	RES	Generally lives in small, shallow streams, less than 7 meters in width, with currents ranging from swift in the canyons to sluggish in the bottom lands.	Unlikely to occur within the project impact area. However, likely to occur in the Santa Ana River	The native range of <i>C. santaanae</i> is southern California including the San Gabriel (east, north and west forks), Los Angeles, and Santa Ana River drainages.
Unarmored threespine stickleback	<i>Gasterosteus aculeatus williamsoni</i>	FE, CE	RES	Lowland streams, springs, river, and marsh.	Unlikely to occur in the project area due to lack of suitable habitat.	

**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
<b>Amphibians</b>						
Arroyo toad	<i>Bufo californicus</i>	FE, CSC	RES	Found in foothill canyons and inter-mountain valleys where the river is bordered by low hills and the stream gradient is low.	Unlikely to occur within the project impact area due to lack of suitable breeding habitat.	The species is currently thought to be restricted to the headwaters of large streams with persistent water from March to mid-June that have shallow, gravelly pools less than 18 inches deep, and adjacent sandy terraces.
California red-legged frog	<i>Rana aurora draytonii</i>	FT, CSC	RES	Deep water ponds with dense stands of overhanging willows and a fringe of cattails ( <i>Typha latifolia</i> ) between the willow roots and overhanging willow limbs.	Unlikely to occur within the project impact area due to lack of suitable breeding habitat.	
Mountain yellow-legged frog	<i>Rana mucosa</i>	FE CSC	RES	Populations appear to be restricted to streams and small pools in ponderosa pine, montane hardwood-conifer, and montane riparian habitat types	Unlikely to occur within the project impact area due to lack of suitable habitat.	There are likely far less than 100 adult frogs left in the entire southern California population, found in four small tributaries of the upper reaches of the San Jacinto River system in the San Jacinto Mountains
Western spadefoot toad	<i>Spea (Scaphiopus) hammondi intermontanus</i>	CSC	RES	Requires rain pools with water temperatures between 9°C - 30°C that persist with more than three weeks of standing water.	Low potential to occur due to lack of optimal habitat.	<i>S. hammondi</i> is found in numerous scattered locations widely distributed throughout western Riverside County, east of the San Jacinto Mountains and desert regions.
<b>Reptiles</b>						
California mountain kingsnake	<i>Lampropeltis zonata zonata</i>	CSC	RES	Found most commonly in the vicinity of rocks or boulders near streams or lake shores,	Unlikely to occur due to lack of optimal habitat.	

**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
Coastal rosy boa	<i>Charina (Lichanura) trivirgata roseofusca</i>	CSC	RES	In coastal areas, occurs in rocky chaparral-covered hillsides and canyons, while in the desert it occurs on scrub flats with good cover.	Low potential to occur due to lack of optimal habitat.	There are scattered documented occurrences for <i>Charina [Lichanura] trivirgata roseofusca</i> throughout western Riverside County.
Coast horned lizard	<i>Phrynosoma coronatum blainvilli</i>	CSC	RES	In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (e.g., floods, fire, roads, grazed areas, fire breaks)	Low potential to occur due to lack of optimal habitat.	
Orange-throated whiptail	<i>Cnemidophorus hyperythrus beldingi</i>	CSC, FP	RES	Found primarily in chaparral, non-native grassland, (Riversidian) coastal sage scrub, juniper woodland and oak woodland	Moderate potential to occur due to lack of optimal habitat. Local habitat limited to fragmented ruderal and active agricultural fields.	No recorded occurrences within the project impact area
Red diamond rattlesnake	<i>Crotalus ruber ruber</i>	CSC	RES	Most commonly associated with heavy brush with large rocks or boulders.	Low potential to occur due to lack of optimal habitat.	
San Bernardino mountain kingsnake	<i>Lampropeltis zonata parvirubra</i>	CSC	RES	Found most commonly in the vicinity of rocks or boulders near streams or lake shores	Unlikely to occur due to lack of optimal habitat.	Known populations for <i>L. z. pulchra</i> occur in the Santa Ana Mountains.
Southwestern pond turtle	<i>Emys (Clemmys) marmorata pallida</i>	CSC	RES	The only native freshwater turtle in the Pacific Coast states. Highly aquatic and associated with riparian habitat including streams, rivers, sloughs, ponds, and artificial water bodies. Deep pools, basking sites, and aquatic vegetation are important habitat components.	Unlikely to occur due to lack of optimal habitat. Local potential habitat limited to irrigation canals and ponds that lack significant vegetation and other habitat features important to pond turtle natural history.	Breeding season is typically between April to August. Eggs laid in an excavated chamber in upland habitat as much as 100 meters from the water. Hatchlings emerge in late summer or fall or over-winter in the nest to emerge the following spring. Adults hibernate in the winter by burying themselves in muddy bottoms underwater or in upland soil and vegetative litter.

**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
Two-striped garter snake	<i>Thamnophis hammondi</i>	CSC	RES	Typically associated with wetland habitats such as streams, creeks and pools. It is closely associated with streams with rocky beds and bordered by willows	Low potential to occur due to lack of optimal habitat.	Annual activity range is between January and November. During hot weather, <i>T. hammondi</i> may be crepuscular or nocturnal.
<b>Birds</b>						
Bald eagle	<i>Haliaeetus leucocephalus</i>	FT, CE	WNTR	Within mainland southern California, the species primarily winters at larger bodies of water in the lowlands and mountains.	Unlikely to breed or nest in the project area due to lack of primary habitat.	
Bell's sage sparrow	<i>Amphispiza belli belli</i>	CSC FSC	RES	Dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains.	Unlikely to breed or nest in the project area due to lack of primary habitat.	Bell's sage sparrow usually nests in sagebrush or chaparral.
California horned lark	<i>Eremophila alpestris actia</i>	CSC, MB	RES	A resident in California. Associated with a variety of open habitats.	Unlikely to breed in the project vicinity due to the lack of significant undisturbed open areas. May forage in nearby fields.	Nests on the ground. Breeding season is from March to July.
Coastal California gnatcatcher	<i>Poliophtila californica californica</i>	FT, CSC	RES	Strongly associated with Coastal and Riversidean sage scrub habitats, particularly those dominated by California sagebrush stands on mesas, gently sloping areas, and along the lower slopes of the coast ranges	Moderate potential due to lack of optimal habitat within the project impact area.	Occurs throughout western Riverside County in suitable habitat.
California condor	<i>Gymnogyps californianus</i>	FE, CE	RES	Found in mountain and foothill rangelands and forest habitats	Unlikely to occur in the project area due to lack of primary habitat and restricted range.	
Cooper's hawk	<i>Accipiter cooperii</i>	CSC	RES	Found in woods and the edges of woods, often hunts around houses and birdfeeders. Nests in tall trees especially pines.	Unlikely to breed in the project vicinity due to the lack of significant wooded areas. Likely to forage in residential areas.	The Cooper's hawk breeds primarily in riparian areas and oak woodlands and apparently is most common in montane canyons.
Golden eagle	<i>Aquila chrysaetos</i>	CSC	RES	Habitat is typically rolling foothills, mountain areas, sage-juniper flats, desert within this range in California. Nests on cliff ledges or large trees.	Unlikely to forage in the area due to lack of prey.	

**TABLE 8.2-3**  
**Special-Status Species Potentially Occurring in the Highgrove Project Area**

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
Grasshopper sparrow	<i>Ammodramus savannarum</i>	FSC, MB	SUMR	Prefers moderately open grasslands and prairies with patchy bare ground.	Unlikely to breed in the project area due to the lack of significant undisturbed open areas. May forage in nearby fields.	Breeding season typically begins in mid-April. A neotropical migrant that primarily winters in Central America.
Least Bell's Vireo	<i>Vireo bellii</i> ssp <i>pusillus</i>	CE, FE	SPR	Primarily occupies riverine riparian habitats that typically feature dense cover within 1-2 meters of the ground and a dense, stratified canopy. It inhabits low, dense riparian growth along water or along dry parts of intermittent streams.	Moderate potential due to lack of optimal nesting habitat. However migrant birds may be found foraging in the riparian areas.	The breeding season for least Bell's vireo is typically mid-March to September and are known to breed almost exclusively within riparian habitats. Nesting sites are typically selected within structurally heterogeneous woodlands, forests and scrubs that support dense vegetation near the ground, and dense horizontally separated vegetation higher up in the canopy.
Loggerhead shrike	<i>Lanius ludovicianus</i>	FSC, CSC, MB	RES	Typically associated with open lowland and foothill scrub or riparian woodland habitats with adequate hunting perches.	Moderate potential due to lack of optimal habitat.	Largely nonmigratory and has been known to defend year-round territories. Nests are typically well-concealed and built in dense shrubs or trees. In California the breeding period typically begins in March and may extend into August.
Southern bald eagle	<i>Haliaeetus leucocephalus</i> ssp <i>leucocephalus</i>	FT, CE	WNTR	California winter range is associated with wetlands, agriculture fields, flooded fields, and open land.	Unlikely to forage in cropland in project area.	Breeds in Aleutian Islands and winters in the Central Valley.
Southwestern willow flycatcher	<i>Empidonax traillii</i> <i>extimus</i>	FE, CE	SUMR	Restricted to riparian woodlands along streams and rivers with mature, dense stands of willows, cottonwoods or smaller spring fed or boggy areas with willows or alders.	Moderate potential due to lack of dense riparian habitat.	



**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
Swainson's hawk	<i>Buteo swainsoni</i>	CT, MB	Winter migrant/ RES	Nests primarily in riparian trees adjacent to grassland, and agricultural areas with scattered trees. Primarily associated with the Central Valley during the breeding season, migrating to Central and South America in the fall/winter.	Low potential due to lack of potential nesting sites.	The breeding season is from March through September. Migrating to Central or South America in fall/winter.
Tricolored blackbird	<i>Agelaius tricolor</i>	CSC, MB	RES	Breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, and tall herbs. Forages in grassland and cropland habitats.	Moderate potential due to the absence of dense tall wetland vegetation growth for nesting in project vicinity. May forage in nearby fields.	Nest in large colonies. Breeding season is April-July. However has also been reported breeding in October and November.
Western burrowing owl	<i>Athene cunicularia hypugaea</i>	FSC, CSC, MB	RES	Habitats includes open grassland habitat with fossorial mammal burrows, often associated with ground squirrels.	Low to moderate habitat for burrowing owl burrows along the railroad corridor and in ruderal fields within the project impact area.	Utilize small mammal burrows for cover and natal dens. Breeding season is typically from February through August.
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	CE, FC	SUMR	Requires dense, wide riparian woodlands with well-developed understories for breeding.	Unlikely to breed in the project area due to lack of required breeding habitat.	Breeding is restricted to river bottoms and other mesic habitats where humidity is high and where the dense understory abuts slow-moving watercourses, backwaters or seeps.
Yellow warbler	<i>Dendroica petechia brewsteri</i>	CSC	WNTR	Occurs in lowland and foothill woodland habitats such as desert oases, riparian woodlands, oak woodlands, mixed deciduous-coniferous woodlands, suburban and urban gardens and parks, groves of exotic trees, farmyard windbreaks, and orchards.	Moderate potential as a winter migrant. Unlikely to breed in the project area due to lack of suitable riparian habitat.	Breed in lowland and foothill riparian woodlands dominated by cottonwoods, alders, or willows and other small trees and shrubs typical of low, open-canopy riparian woodland.

**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
<b>Mammals</b>						
Aguanga kangaroo rat	<i>Dipodomys merriami collinus</i>	CSC	RES	Associated with Riversidean sage scrub, chaparral, redshank chaparral and non-native grassland.	Unlikely to occur in the project area. Outside of its normal distributional range.	Within Riverside County the Aguanga kangaroo rat occurs in the Aguanga Valley and Wilson Creek north of Radec, and probably is scattered throughout sandy wash areas in the region west of the Anza Valley, particularly in Temecula Creek and tributaries east of Vail Lake
American badger	<i>Taxidea taxus</i>	CSC	RES	In California, Badgers occupy a diversity of habitats. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground.	Unlikely due to the highly developed nature of the project area.	Agricultural activity is adverse to Badgers, as they do not survive on cultivated land.
Los Angeles pocket mouse	<i>Perognathus longimembris brevinasus</i>	CSC	RES	Habitat of the Los Angeles pocket mouse has never been specifically defined, although Grinnell (1933) indicated that the subspecies "inhabits open ground of fine sandy composition".	Moderate potential due to the highly developed nature of the project area.	The inland valleys from San Bernardino south to the vicinity of Temecula appear to be the remaining stronghold for this subspecies.
Northwestern San Diego pocket mouse	<i>Chaetodipus fallax fallax</i>	CSC	RES	Inhabits coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities in open, sandy areas of both the Upper and Lower Sonoran life-zones of southwestern California and northern Baja California.	Moderate potential due to the highly developed nature of the project area	
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	FE, CSC	RES	Typically found in alluvial fan sage scrub and sandy loam soils, alluvial fans and flood plains, and along washes with nearby sage scrub.	Low potential due to lack of optimal habitat and the highly developed nature of the project area	

**TABLE 8.2-3**  
Special-Status Species Potentially Occurring in the Highgrove Project Area

Common Name	Scientific Name <sup>a</sup>	Status <sup>b</sup>	Season <sup>c</sup>	Primary Habitat <sup>d</sup>	Potential Occurrence in Project Area	Comments
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	FE, CT	RES	Inhabits annual grassland with sparse perennial vegetation in the San Jacinto Valley and adjacent areas of western Riverside and northwestern San Diego County.	Low potential due to lack of optimal habitat and the highly developed nature of the project area	A previously unknown population of the kangaroo rat was discovered in the Ramona Valley, San Diego County, in October 1997. It is not known if this species still inhabits extreme southwestern San Bernardino County.

Notes:

<sup>a</sup> Scientific names are based on the following sources: American Ornithologists Union (AOU), 1983; Jennings, 1983; Zeiner et al., 1990a-c.

<sup>b</sup> Status. Status of species relative to the Federal and California State Endangered Species Acts and Fish and Game Code:

Federal Status

FE Federally listed as endangered.

FT Federally listed as threatened.

FPE Proposed endangered.

FPT Proposed threatened.

Candidate for listing as federally endangered or threatened. Proposed rules have not yet been issued because they have been precluded at present by other listing activity.

FD Delisted from Federal threatened or endangered status.

FSC Federal Species of Special Concern. Proposed rules have not yet been issued because they have been precluded at present by other listing activity.

MB Migratory Bird Treaty Act. of 1918. Protects native birds, eggs, and their nests.

California Status

CE State listed as endangered. Species whose continued existence in California is jeopardized.

CT State listed as threatened. Species that although not presently threatened in California with extinction are likely to become endangered in the foreseeable future.

CSC California Department of Fish and Game "Species of Special Concern." Species with declining populations in California.

FP Fully protected against take pursuant to the Fish and Game Code Sections 3503.5, 3511, 4700, 5050, 5515.

Other Status

CNPS California Native Plant Society Listing (does not apply to wildlife species).

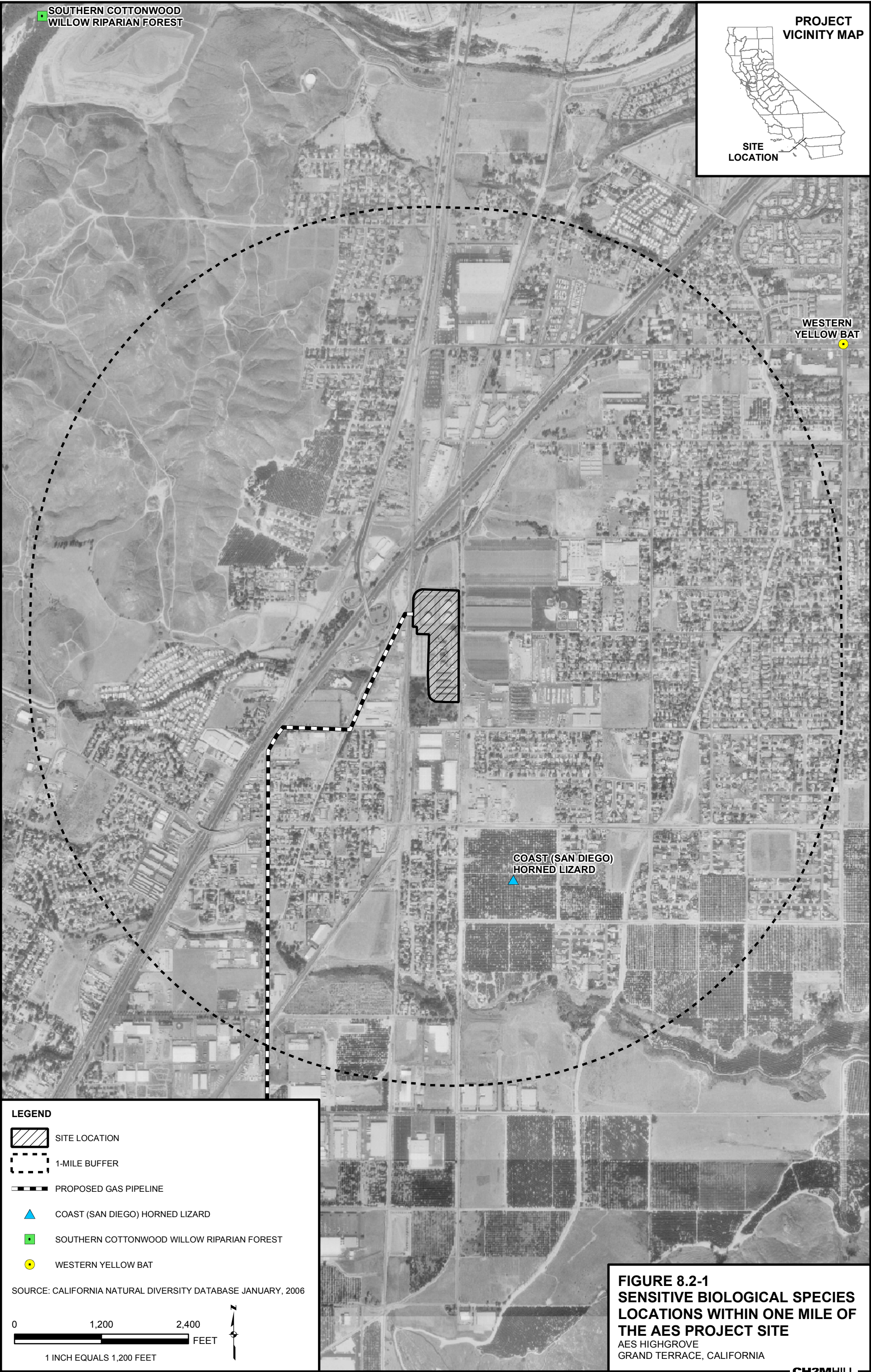
Plants, rare, threatened or endangered in California and elsewhere and are rare throughout their range. According to CNPS, all of the plants constituting List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code and are eligible for state listing.

<sup>c</sup> Season. Blooming period for plants. Season of use for animals. RES = Resident; SUMR = Summer; WNTR = Winter.

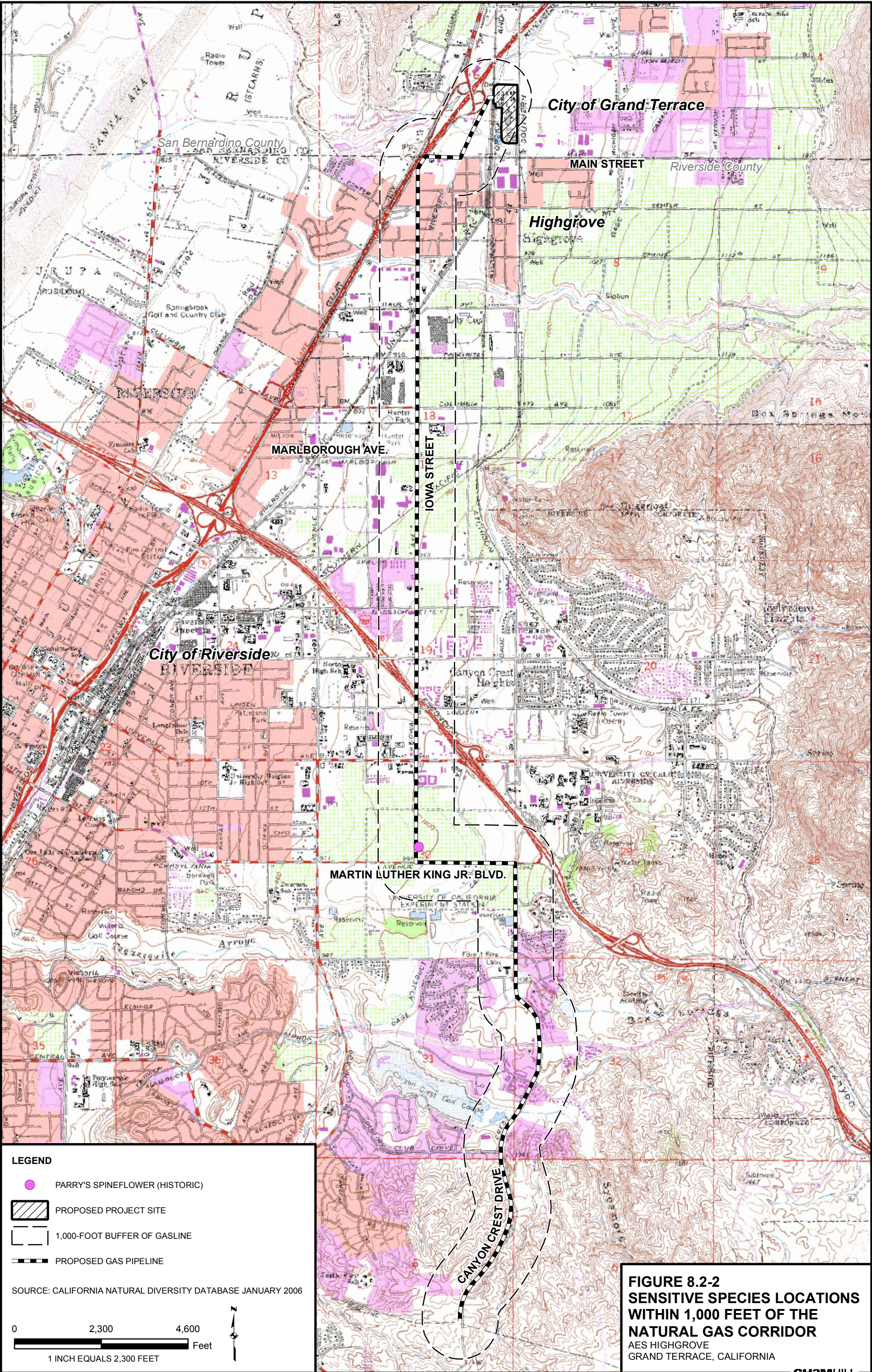
<sup>d</sup> Primary Habitat. Most likely habitat association.

Sources: CDFG, 2005; CNPS, 2001.









**FIGURE 8.2-2**  
**SENSITIVE SPECIES LOCATIONS**  
**WITHIN 1,000 FEET OF THE**  
**NATURAL GAS CORRIDOR**  
AES HIGHGROVE  
GRAND TERRACE, CALIFORNIA



